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Notice of Allowability	Application No.	Applicant(s)	
	09/728,189	BATTERSBY ET AL.	
	Examiner	Art Unit	
	Prasad R Akkapeddi	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/2/2003.
2. ☒ The allowed claim(s) is/are 1-13.
3. ☒ The drawings filed on 13 January 2003 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>02/09/2004</u> . |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Aaron Waxler on 02/09/2004.

The application has been amended as follows:

In the claims

In claim 1, line 6, after "regions", "on" has been deleted; and - -contacting- - has been inserted.

In claim 6, line 7, after "regions", "on" has been deleted; and - -contacting- - has been inserted.

In claim 10, line 7, after "regions", "on" has been deleted; and --contacting- - has been inserted.

Specification

2. The title of the invention is not descriptive. The title has been changed as follows: "Liquid crystal display having a polymer or spin-on glass as a capacitor dielectric and a method of manufacture".

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

Applicant's submission filed on 08/15/2003 has been entered.

Response to Arguments

4. Applicant's arguments, see Examiner's amendment, filed 02/09/2004, with respect to claims 1,6 and 10 have been fully considered and are persuasive.

The final rejection of 07/21/2003 has been withdrawn.

Allowable Subject Matter

5. Claims 1-13 are allowed.

6. The following is an examiner's statement of reasons for allowance:

A search of the prior did not disclose a transistor substrate, a liquid crystal display and a method of manufacturing a transistor substrate for a liquid crystal display comprising a combination of structural elements, more specifically:

(a) A transistor having an insulated-gate staggered structure with substantially coplanar source and drain regions contacting the substrate, wherein the gate region has a first and second layer and the second polymer or spin-on glass layer that extends to the capacitor to define capacitor dielectric.

(b) A liquid crystal display with transistors having an insulated-gate staggered structure with substantially coplanar source and drain regions contacting the substrate, wherein the gate region has a first and second layer and the second polymer or spin-on glass layer that extends to the capacitor to define capacitor dielectric and wherein the thicknesses of the first and second layers are selected such that the charging time constant of each pixel is invariable to first order changes in the thickness of second layer defining the capacitor dielectric.

(c) A method of manufacturing a transistor substrate for a liquid crystal display having an insulated-gate staggered structure with substantially coplanar source and drain regions contacting the substrate, wherein the gate region has a first and second layer and the first layer being patterned to remove it from areas corresponding to the capacitors and the second layer being deposited by a non-vacuum process and extending to the areas corresponding to the capacitors to define capacitor dielectric.

None of the cited prior art or the newly cited art i.e., (a) Rho et al. (U.S. Patent No. 6,057,896) and (b) Ikeda et al. (EP 0 668 528) discloses

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that source and the drain regions are in contact with the substrate and the second layer made of polymer or spin-on glass extends to the capacitor to define capacitor dielectric.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prasad R Akkapeddi whose telephone number is 571-272-2285. The examiner can normally be reached on 7:00AM to 5:30PM M-Th.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Examiner
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